

Predictors of Prejudice Perceptions and the Role of Group Identification in International  
Students

by

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A thesis  
submitted in partial fulfillment  
of the requirements for the degree  
Master of Arts

Department of Psychology  
BROCK UNIVERSITY  
St. Catharines, Ontario

July 2009

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## Abstract

The purpose of the present study was first to determine what influences international students' perceptions of prejudice, and secondly to examine how perceptions of prejudice would affect international students' group identification. Variables such as stigma vulnerability and contact which have been previously linked with perceptions of prejudice and intergroup relations were re-examined (Berryman-Fink, 2006; Gilbert, 1998; Nesdale & Todd, 2000), while variables classically linked to prejudicial attitudes such as right-wing authoritarianism and openness to experience were explored in relation to perceptions of prejudice. Furthermore, the study examined how perceptions of prejudice might affect the students' identification choices, by testing two opposing models. The first model was based on the motivational nature of social identity theory (Tajfel & Turner, 1986) while the second model was based on the cognitive nature of self-categorization theory/ rejection-identification model (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; Schmitt, Spears, & Branscombe, 2003).

It was hypothesized that stigma vulnerability, right-wing authoritarianism, openness to experience and contact would predict both personal and group perceptions of prejudice. It was also hypothesized that perceptions of prejudice would predict group identification. If the self-categorization/rejection-identification model was supported, international students would identify with the international students. If the social mobility strategy was supported, international students would identify with the university students group.

Participants were 98 international students who filled out questionnaires on the Brock University Psychology Department Website. The first hypothesis was supported. The combination of stigma vulnerability, right-wing authoritarianism, openness to experience

and contact predicted both personal and group prejudice perceptions of international students. Furthermore, the analyses supported the self-categorization/rejection-identification model. International identification was predicted by the combination of personal and group prejudice perceptions of international students.

## Acknowledgements

This has been a long, and tiring road, but it was well worth it! I would like to thank my committee, Dr. Stan Sadava and Dr. Gordon Hodson for all their valuable help and advise, but also Dr. Nancy DeCourville for all her statistical help and for never failing to cheer me up! Many special thanks to my supervisor Dr. Angela Book, who was there for me every step of the way, with constant encouragement and support.

Lastly, to my husband Christos thanks for all the babysitting and to baby Philippos thanks for being such a good boy! I love you both!

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## Introduction

### *International Students and Perceptions of Prejudice*

There is a great deal of anecdotal and empirical evidence showing that international students are still experiencing prejudice (Hanassab, 2006; Krahe, Abraham, Felber, & Helbig, 2005). Reading an article in the Brock Press in 2006 titled *Understanding international students*, it was clear that even international students attending the same university have differing experiences. One student featured in the article said, “They (Canadian classmates) used to laugh at my accent or pretend not to understand me when I wanted to make conversation with them”, while another student said, “Canadian students are so nice that it is almost ignorance”(The Brock Press, 2006). Researchers have also found that perceptions of prejudice are common amongst international students. For example, in a study by Krahe and his colleagues (2005), it was found that 88.8% of international students in Germany and 78.4% of international students in the United Kingdom personally perceived prejudice and discrimination. However, perceptions differed in terms of the severity of perceived prejudice. Some students reported prejudice as patronizing comments others as behaviors involving denial of equal treatment and a surprising number of students in both countries (26.7% in Germany and 10.1% in the United Kingdom) reported some kind of physical assault. While some actions (such as physical assault) have a clear negative intent, some of the reported behaviours are more ambiguous, and therefore, open to interpretation. This highlights the importance of examining perceptions of prejudice rather than focusing on prejudice itself.

Further, perceptions of prejudice in the university setting have been linked with several negative outcomes for the students experiencing it, such as poor adjustment

(Amaury & Cabrera, 1996), devaluation of academic success, discounting of poor academic outcomes (Schmader, Major, & Gramzow, 2001) and uncertainty of one's academic knowledge (Aronson & Inzlicht, 2004). In 1996, Amaury and Cabrera attempted to document the role that perceptions of prejudice played in the students' university life. A sample of 831 university students, at a predominantly White university in the United States of America, which included Native Americans, African Americans, Asian Americans, Hispanic and White students filled out a questionnaire. It consisted of 114 items measuring amongst others perceptions of prejudice-discrimination, academic performance, commitment to the institution, educational aspirations, academic and intellectual development, academic experiences and social integration. The researchers found that minority students who perceived less prejudice and discrimination were more likely to report positive experiences with faculty and academic staff, and were more likely to feel satisfied with their social life on campus. In addition Amaury and Cabrera (1996) found that minority students who perceived higher levels of discrimination were less likely to feel that their academic experience had a positive influence on their intellectual growth (academic and intellectual development).

Previous research has also found that African American and Latin American college students experience psychological disengagement as a coping strategy for their poor academic outcomes (Schmader, Major, & Gramzow, 2001). Two processes took place; devaluing academic success and discounting the validity of academic outcomes. The researchers hypothesized that ethnic minority students would disengage their self-esteem from their academic outcomes either by devaluing the importance of academic success or by discounting academic feedback and test scores as poor indicators of academic ability

(Schmader et al., 2001). African American students who believed that their own ethnic group was targeted by discrimination felt that they were personally targeted by injustices such as biased tests. They also reported that academic success was not important to them. Moreover, Latin American students devalued academic success to the extent that they did poorly in university.

Perceiving prejudice and discrimination in university can also impair self knowledge and influence self- confidence. In a 2004 study, Aronson and Inzlicht proposed that stereotype vulnerability, the tendency to expect and be bothered by prejudice and to be affected by stereotype threat, would impair self-knowledge in at least two ways. The researchers argued that stereotype vulnerability would increase students' tendency to mistrust performance feedback and would increase the difficulty of developing a clear academic self knowledge of one's strengths and weaknesses. Moreover, stereotype vulnerability would encourage "unstable efficacy" (Aronson, & Inzlicht, 2004); academic self-confidence that fluctuates more readily and more extremely than it does for the average student. The study compared African American and European American students at an American university. They measured students' stereotype vulnerability and examined stability in academic efficacy and self-esteem. Aronson and Inzlicht (2004) found that regardless of performance level, African American students who were stereotype vulnerable had a less clear academic self knowledge than other participants. In addition, African American students demonstrated more numerous and more extreme ups and downs in their academic self confidence.

Considering these findings, it is difficult to determine whether prejudice, or the mere perception of prejudice, is more important regarding outcomes. If indeed, international

students face negative outcomes in university because of their perceptions of prejudice then it is important to know what influences these perceptions and not whether they are realistic or not. Finding out what makes international students feel more positive about their university experience could also be useful in decreasing perceptions of prejudice and associated consequences/outcomes. The present study is interested in what influences perceptions of prejudice and explores a number of possible variables, such as, stigma vulnerability, right-wing authoritarianism, openness to experience, contact, and examines the role of group identification in international students' perceptions of prejudice.

*Defining international students.* The present study defined international students as students attending university in countries other than their country of origin, to obtain an undergraduate and/or graduate degree. For example, an Iranian student studying in Canada, a Canadian studying in America or an Italian studying in Spain are all considered by the present study to be international students. An international student can be a non-native speaker of the language spoken in the country where he/she attends university, who also has to adjust to a very different culture or on the other side he/she can be someone who is a native speaker of the language spoken who comes from a similar culture.

International students were defined as such, in order to present a more clear picture of how international students perceive their university experiences. Previous studies looking at international students (Crocker & Major, 1989, 2003; Krahe, et al., 2005; Nesdale & Todd, 2000) looked only at international students who were visible minorities in the university, overlooking international students who might be less visible, or who have less or no difficulty mastering the spoken language and adjusting to the culture of the country

where they attend university. The present study attempted to extend previous literature, by looking at the broader spectrum of international students and not only focusing on visible minorities.

### *Stigma Vulnerability and Perceptions of Prejudice*

Stigma vulnerability is defined as the tendency of socially stigmatized individuals to make attributions of prejudice against their group as an explanation for negative interpersonal outcomes in ambiguous situations. The notion of stigma vulnerability applies to individuals who are socially stigmatized and who are regularly faced with a dilemma; deciding whether negative outcomes in their life are a result of prejudice or not (Gilbert, 1998).

The idea of stigma vulnerability has its roots in attribution theory. Heider (1958) in his book *The Psychology of Interpersonal Relations* reported that all behaviour is considered to be determined by either external or internal attributions. In the case of perceptions of prejudice, an example of an external attribution would be thinking that failing a course was caused by the professor's prejudicial attitudes, while an internal attribution could be thinking that your failure in the course was caused by your inability to perform well in class discussions. Heider (1958) described attributions to prejudice as a way to explain a negative event as the result of someone else's bias against one's category/group membership.

Following Heider's theory of attributions, Kelley (1973) went on to present three factors that affected the formation of attributions: consistency, distinctiveness and consensus. Consistency refers to whether the individual behaves identically from case to case in a given situation. Distinctiveness is whether the individual behaves identically

when the given situation is changed. Consensus describes whether others behave identically in a given situation. According to Kelley (1973) individuals do not undergo an attributional analysis for every event that takes place in their life. Individuals go through an attributional analysis when they come across challenges in their environment. For example, when facing unexpected information, and negative outcomes, an individual would likely go through an attributional analysis to gain or maintain control of the situation. Kelley stated that individuals think like scientists and attribute causality to factors that covary with the event (Crocker & Major, 1989). Therefore if an international student keeps receiving negative feedback from professors and domestic students do not, then group membership would seem to cause the event. Moreover, if this negative feedback does not seem to covary with ability, effort or performance, then prejudice would seem to be the cause of the negative feedback.

Dion (1975), one of the first researchers to look at prejudice focusing on the individuals who are the targets of prejudice rather than the ones being prejudiced, also looked at attributional ambiguity. He suggested that because the experience of prejudice is often ambiguous, individuals who perceive prejudice find themselves in an attributional dilemma as to whether a negative experience they had was due to prejudice or due to their own failure or personality characteristics (Dion, 2001). In a study conducted in 1975, Dion asked female university students to compete against several other students at a task in which the opponents could not see each other. The experimenter led each participant to believe that the opponents were either all male or all female. After completing the task, the experimenter informed the participant that she failed either mildly or severely compared to her opponents, and was then asked to rate

herself on positive and negative aspects of the female stereotype, and on self-esteem traits. They were also asked to report to what extent they felt their opponents were biased or prejudiced toward them. Findings indicated that the women who thought their opponents were highly prejudiced men, went on to evaluate themselves more positively on positive traits of the female stereotype such as nurturance and warmth. The results suggested that attributing a negative experience to prejudice could protect some aspects of the self-concept.

Crocker and Major (1989, 2003) also focused on attributional ambiguity. In their 1991 study, Crocker and Major conducted an experiment with African American students. Participants were told that the study was about friendship formation and that they would be paired up with either an African American or a White student. All participants were then told their partner was a White student and of the same gender as the participant. The study had a prejudice condition where participants were told that their partner could see them through a one-way mirror. In the non-prejudice condition participants were told that their partner could not see them. Participants then received either negative or positive feedback from their partner. The results of the study showed that participants tended to attribute feedback to prejudice more so when the feedback was negative rather than positive. The effect was more pronounced when they thought they could be seen by their partner.

Seeing that most studies on attributional ambiguity have been conducted within the laboratory, Gilbert (1998) decided to develop a scale so future research can look at this phenomenon outside of the usual laboratory setting. She developed the Prejudice Perception Assessment Scale. The Prejudice Perception Assessment Scale (PPAS)



consisted of five hypothetical vignettes about ambiguous situations that might or might not indicated prejudice. Responses to the vignettes assessed the extent an individual attributed negative interpersonal outcomes to prejudice in ambiguous situations. The scale was developed for African American students studying at predominantly Euro-American campuses.

Gilbert (1998) established construct validity for the PPAS by running a pilot sample of 66 African American college students. The participants completed the PPAS along with the Cultural Mistrust Inventory and an abbreviated version of the Marlowe-Crowne Social Desirability scale. As expected, the PPAS was distinctly different but positively related with cultural mistrust with a zero-order Pearson product-moment correlation of .38. In addition, discriminant validity was established with a Pearson product-moment correlation of .04 between the PPAS and the social desirability scale. The researcher went further to explore the internal consistency of the PPAS and administered the scale again to 109 African American students. She found that the scale had a good internal consistency with a Cronbach's  $\alpha$  of .84. A principal components analysis was performed and revealed that the PPAS measured stigma vulnerability as a unidimensional variable with one factor. Gilbert (1998) suggested that the scale could be easily modified to measure stigma vulnerability in other ethnic minority groups, or other socially stigmatized groups.

Attributions of negative outcomes to prejudice could easily become problematic. International students could not only assume prejudice in negative events that indeed are rooted in prejudicial attitudes but also in negative events that have no relation to prejudice. An international student high on stigma vulnerability will more likely see

prejudice around him in the form of getting a bad mark, in random actions of other people, in a university staff's impolite treatment and so on. Even though these negative events could be indeed the results of prejudice against international students, they could also be explained as the student's failure to study hard for a test, or even just dealing with a staff member who is impolite to everyone. If an international student explains all negative situations as results of prejudice against the self and the group of international students, then it is natural that he/she will also report more prejudice. Given previous research (Crocker & Major, 1989; Dion, 1975; Gilbert, 1998) an international student's stigma vulnerability is expected to predict personal and group perceptions of prejudice.

### *Individual Differences*

Two individual differences that have been linked to the willingness to have contact, and to intergroup relations are right-wing authoritarianism and openness to experience (Dhont & Van Hiel, 2009; Hodson, Harry, & Mitchell, 2009; Jackson & Poulsen, 2005). Given these relationships, it is also possible that these traits are important in the tendency to perceive prejudice in the interactions one has with other groups.

*Right-Wing Authoritarianism.* Adorno, Frenkel-Brunswik, Levinson and Sanford (1950) first proposed the concept of the authoritarian personality. They argued that the appearance of certain attitudes such as ethnocentrism and anti-Semitism were closely linked with people's personality structure, specifically authoritarianism. The authoritarian individual could be identified by their conformity, submission to authority, intolerance, insecurity, superstition and stereotyped thought patterns (Adorno et al., 1950). Considering the idea of the authoritarian personality, Adorno and his colleagues constructed the F-scale which consisted of nine subscales. According to Adorno et al.

(1950), “Each (subscale) was regarded a more or less central trend in the person which, in accordance with some dynamic process, expressed itself on the surface in ethnocentrism as well as in diverse psychologically related opinions and attitudes” (p. 157). The nine subscales were conventionalism, authoritarian submission, authoritarian aggression, anti-intraception, superstition and “stereotypy”, power and “toughness”, destructiveness and cynicism, projectivity and sex. A key feature of the authoritarian personality was presented both in the authoritarian aggression and projectivity subscales. An individual with an authoritarian personality would be predisposed to hostility towards out-groups, and would lead life with a “them vs. us” perspective, while he/she would tend to be on the lookout, believing that wild and dangerous things go on in the world (Adorno et al., 1950).

In the 1960s, Rokeach attempted to examine and measure authoritarianism on a broader scope. He maintained the idea of a close relationship between individual differences and prejudice and proposed the dogmatism scale which would measure authoritarianism “in religious and antireligious movements, in communism and fascism, and in fields of human endeavor far removed from the political and religious arenas, such as in the academic world and in the worlds of art and literature” (p.9). Rokeach’s dogmatism scale made a distinction between an open and a closed mind. Rokeach (1960) aspired to conceive of authoritarianism in a way that it would be equally applicable to all stages of history and to alternative forms of authoritarianism within a given historical stage. He viewed personality as an organization of belief systems having a definable and measurable structure; a belief system being a system that represented all the beliefs, expectancies, or hypotheses, conscious and unconscious, that a person at a given time

accepts as true. Rokeach (1960) believed that prejudice arose from an individual's avoidance of belief systems incongruent with one's own and not from a general conditioning to hate outgroups. Prejudice could disappear by bringing together people of varying racial or ethnic groups who had congruent belief systems.

Similar to what Adorno et al. (1950) had suggested, Rokeach (1960) conveyed that an individual with a more closed mind, would see the world as more threatening, and would believe more in absolute authority, while he/she would evaluate other individuals according to the authorities they line up with. On the contrary, the world would seem to be a friendlier place by the relatively open minded person (Rokeach, 1960).

In the early 1980s Altemeyer studied the F-scale and worked on redefining the idea of the authoritarian personality. Altemeyer (1981) thought that three out of the nine traits presented in the F-scale were particularly important. The three traits Altemeyer indicated were conventionalism, authoritarian aggression and authoritarian submission. Through this conceptualization, the F-scale was refined into the Right-Wing Authoritarianism scale. According to Altemeyer (1998) conventionalism is the tendency to obey and accept social conventions and rules set by authority figures, while authoritarian aggression is described as an aggressive attitude towards individuals or groups disliked by the authorities. Finally, authoritarian submission is submission to authorities and authority figures. Adhering to what Adorno and Rokeach previously noted, Altemeyer (2004) stated that individuals high on right-wing authoritarianism are scared and they see the world as a dangerous place. In September 1996, Altemeyer asked 354 introductory psychology students to complete a two-session experiment. Students had to complete a measure of right-wing authoritarianism along with scales of prejudice against several

groups, values such as power, security and traditionalism as well as a scale measuring how much someone sees the world as dangerous. Following the idea that right-wing authoritarians see the world as a dangerous place, the dangerous world scale showed a .49 positive correlation with the right-wing authoritarianism measure (Altemeyer, 1996). The more an individual saw the world as a dangerous place, the higher the individual scored on right-wing authoritarianism and vice versa (Altemeyer, 2004).

A study by Duckitt, Wagner, du Plessis, and Birum (2002) looked at the role of right-wing authoritarianism in influencing prejudice against particular outgroups. More specifically, the researcher looked at the tendency of individuals high on right-wing authoritarianism to see the world as a dangerous place and dislike groups that perceive as a threat to their group. The results showed that the relation between right-wing authoritarianism and outgroup prejudice was mediated by perceived threat from outgroups.

Again the key characteristic of authoritarianism was pointed by Altemeyer (1981, 1998) who suggested that individuals who are high in authoritarianism tend to organize their worldview in terms of ingroups and outgroups and are highly ethnocentric. In particular, individuals high on the right-wing authoritarianism scale, see members of outgroups as a threat, and that, due to their ethnocentrism, they usually travel in tight circles of like-minded people. Right-Wing Authoritarianism correlated with negative attitudes toward African-Americans, homosexuals, and women (Altemeyer, 2004).

Given the clear link between right-wing authoritarianism and the tendency to perceive the world as a dangerous place and more importantly to think in terms of ingroup and outgroup (Adorno et al., 1950; Altemeyer, 2004; Duckitt et al., 2002; Rokeach, 1960), an

international student high on right-wing authoritarianism could be predisposed to see hostility, discrimination and prejudice in the university setting, and think in terms of ingroup/outgroup; with the international students being the ingroup and the domestic students being the outgroup. Therefore, right-wing authoritarianism is expected to predict perceptions of prejudice.

*Openness to Experience.* Openness to experience refers to people's willingness to make adjustments to existing attitudes and behaviours once they are exposed to new ideas and situations. Individuals higher on openness to experience tend to be more cultured, curious and open minded (Flynn, 2005). Lee and Ashton (2004) measured openness to experience in term of four different facets; aesthetic appreciation, inquisitiveness, creativity and unconventionality. More directly related to prejudice, inquisitiveness assessed an individual's tendency to seek information about the human world, while unconventionality assessed the tendency to accept the unusual. According to Lee and Ashton (2004) an individual high on inquisitiveness and unconventionality would be more interested in travel and would be more receptive to ideas that might seem strange or radical. As stated by Flynn (2005), research has shown that White individuals who are high on openness to experience may embrace more tolerant interracial attitudes and form more favourable impressions of Black people. In her research, she predicted that self-reported ratings of openness to experience would correlate with explicit measures of racial attitudes. In addition, she predicted that participants who were more open would be more willing to consider stereotype-disconfirming information. Flynn's (2005) findings suggested that an individual's degree on openness to experience could be a partial explanation of his/her interracial judgments. For example, an individual who was more

open to experience would be more willing to accept outgroup members and disregard any previous stereotypical information he/she had on members of that specific outgroup.

While the role of openness to experience in prejudicial attitudes and beliefs has been shown by previous research (Flynn, 2005), the present study tries to explore a possible relationship between openness to experience and perceptions of prejudice. International students who are more open to experience, might be more willing to embrace the different culture of the country they are studying in, and might also have a better understanding of the different ways domestic students socialize, and interact with others. An international student who is not open to experience might interpret different customs and interactions as evidence of prejudice. In sum, the more open to experience an international student is, the less prejudice he/she will perceive in the university setting and vice versa. Therefore, it is expected that openness to experience will predict perceptions of prejudice.

#### *The Contact Hypothesis and Perceptions of Prejudice*

For the past 50 years, contact between groups has been a widespread strategy to improve intergroup relations. The contact hypothesis proposes that contact between groups under certain conditions could improve intergroup relations (Allport, 1954; Dovidio, Gaertner, & Kawakami, 2003).

One of the first, and most well-known studies conducted emphasizing the importance of the context in which intergroup contact occurs, was the Robbers Cave Experiment in 1954 (Sherif, Harvey, White, Hood, & Sherif, 1961). The researchers had twenty-two boys, who attended a summer camp, randomly assigned to two groups. At first and over a period of a few weeks, the boys interacted in their separate groups unaware of the

existence of the other group. The two groups were then introduced by engaging in a series of competitive activities that created intergroup conflict. Following competition, the boys had the opportunity to experience intergroup contact under neutral conditions and at the end of the study the boys participated in a series of cooperative activities that were designed by the researchers to reduce intergroup conflict. Sherif and his colleagues (1961) concluded that when the two groups met under competitive conditions, ingroup cooperativeness, solidarity and intergroup hostility increased. More specifically, intergroup hostility was so high that groups started acting in a very hostile manner and using derogatory stereotypes against each other. On the other hand, after the groups were introduced to a series of cooperative activities, intergroup conflict not only began to disappear but the two groups were able to cooperate and intermingle.

Based on the findings of Sherif and his colleagues, Gordon Allport formulated the contact hypothesis. In his 1954 book *The Nature of Prejudice*, he suggested that intercultural relations could be improved by positive contact between members of different groups. According to Allport, when groups meet they typically pass through four successive stages of relationship. At first there is sheer contact, which soon leads to *competition*; *competition* being a clash of interests and values between members of the different groups. *Competition* gives way to *accommodation* which is defined as the tendency of the two different groups to develop relatively stable patterns of communication, and finally to *assimilation*; *the two groups merging into one*. Allport stated that mere contact was not enough to improve group relations but key elements were needed to improve relations. The quantity of contact, the status of the contact, the relationship between the groups, the social atmosphere surrounding the contact, the



personality of the individual experiencing the contact and the areas of contact were some of the variables that could impact whether contact would improve intergroup relations (Allport, 1954). According to Allport (1954), the effect of contact will depend upon the kind of association that occurs and upon the kinds of persons who are involved. In order for two groups to establish an ideal contact situation and improve their relationships, the two groups should experience frequent contact, they should feel they are of equal status, their contact should be cooperative, and their contact should be supported by society.

Amir (1969) further developed this idea of contact and presented five contact criteria that would promote positive attitudes between groups. Similar to Allport, Amir (1969) maintained that contact should be between people of equal status, that authorities and norms should favour contact, and that both groups should have cooperative goals for the contact. Contact should also be interpersonal, pleasant and rewarding for both groups, with intimacy playing an important role (Amir, 1969).

Wagner, Hewstone and Machleit (1989) reintroduced the idea of contact under favourable circumstances and suggested that in many situations individuals may avoid contact even when the opportunity for contact is available. To test these assumptions, the researchers investigated mutual attitudes of West German and Turkish pupils in Germany. They looked at three different types of contact: neighbourhood contact, school contact and leisure time contact. A negative correlation was expected between leisure time contact and prejudice among West Germans and Turks, while the effects of neighbourhood and school contact on prejudice were exploratory. The results showed that negative attitudes against Turks were associated with the frequency of contact during leisure time. The more leisure time West German students spent with Turkish students,

the less negative attitudes towards Turks they reported. In addition, even the simple presence of Turkish classmates was associated with a reduction in negative attitudes towards Turks. On the other hand, no relationships were significant between contact and the Turkish pupils' attitudes towards the West Germans. While, the researchers could not determine the direction of contact-prejudice relation, they stressed the importance of the type of contact involved.

The role of intergroup friendship on prejudice was also examined by Pettigrew (1997). He suggested that friendship across group lines is very important since it involves long-term contact and it is likely to meet all the key conditions of the contact hypothesis. The study presented four hypotheses:

1. Intergroup friendship would negatively relate to prejudice
2. Intergroup friendship effects would generalize to policy preferences concerning immigration. Friendship will be positively related to attitudes toward pro-outgroup public policies.
3. Intergroup friendship effects would generalize widely to less prejudice and more positive feelings toward outgroups of many types.
4. These relationships would reflect intergroup friendship causing reduced prejudice more than they would reflect the opposite causal path of less prejudiced people establishing more intergroup friendships.

The data were derived from surveys conducted as part of the European Community's Euro-Barometer survey in the fall of 1988. Respondents were from France, the Netherlands, Great Britain and then-West Germany. The target outgroups used were Turkish immigrants for the West-German group, North

Africans and Asians for the French group, Surinamers and Turks for the Netherlands group and finally West Indians and Asians for the Great Britain group. Results showed support for all four hypotheses. Respondents who had intergroup friends were more likely to report having felt “sympathy” and “admiration” for minority members than those without such friends. Moreover, respondents who had intergroup friends were more likely to believe that the presence of immigrants is good for the future of the country. Furthermore, Pettigrew found that individuals who had friends from one of the minority groups had positive feelings toward all nine groups.

Pettigrew (1998) went on to suggest a reformulation of intergroup contact theory, where constructive contact related more to long-term close friendships rather than to initial acquaintanceship. Pettigrew believed that intergroup contact required time, so intergroup friendships could develop, forcing individuals involved to engage in close interactions and make self-disclosures. The researcher proposed a longitudinal model that involved features such as individual differences, conditions and situational factors for positive intergroup outcomes, and the time dimension which allowed time for individuals to have an initial contact, then to establish frequent and meaningful contact and lastly to form intergroup friendships.

In 2006, Pettigrew and Tropp performed a meta-analysis of the intergroup contact theory to assess the overall effect between intergroup contact and prejudice, using 515 individual studies with 713 independent samples and 1,383 non-independent tests. In total, 250,089 individuals from 38 different countries participated in the research (Pettigrew & Tropp, 2006). The meta-analytic results confirmed that intergroup contact

typically reduces intergroup prejudice. Moreover, Pettigrew and Tropp (2006) found that the intergroup contact effects are generalizable; not only do attitudes towards the immediate participants become more favourable but so do attitudes toward the entire outgroup, outgroup members in other situations and even on outgroups not involved in the contact. The findings also revealed that intergroup contact may be useful for reducing prejudice in many different situations and contexts such as different target groups, age groups, geographical areas and contact settings.

Pettigrew and Tropp's meta-analysis offered important insights concerning Allport's contact conditions in reducing prejudice. While studies using Allport's conditions for contact showed a generally more enhanced positive effect of contact on prejudice, other studies showed that Allport's conditions were not essential for intergroup contact to reduce prejudice. To be more specific, while 94% of the 713 samples in the analysis showed an inverse relationship between contact and prejudice, only 19% of those samples involved contact situations that followed Allport's conditions. Pettigrew and Tropp (2006) concluded that Allport's contact conditions should be seen as facilitating (rather than necessary) conditions that enhance the tendency for positive contact outcomes to emerge.

A recent study by Berryman-Fink (2006) looked at the role of intergroup contact in reducing prejudice in universities. The study investigated Amir's (Amir, 1969) contact criteria among college students' generalized prejudice and attitudes towards others of different race, sex and sexual orientation. The study proposed that students whose university promotes contact and offers the opportunity to engage in equal status, interpersonal and rewarding contact, were more likely to have less prejudice and more

positive attitude towards students of a different race, sex and sexual orientation. He tested these hypotheses with a sample of 284 university students from three different universities. The students filled out questionnaires that measured generalized prejudice, attitudes towards others based on race, sex, and sexual orientation and the five factors of contact. The results showed that the reduction of generalized prejudice as well as prejudice against students of other race, sex and sexual orientation were significantly associated with equal, cooperative, rewarding contact and contact supported by the university and social network of the students. The researcher concluded that universities must associate institutional support for diversity with opportunities for students to interact with others in cooperative tasks to form rewarding relationships with each other (Berryman-Fink, 2006).

In a similar study, Nesdale and Todd (2000) attempted to promote contact between international and Australian students. The study had three aims: to assess the efficacy of an intervention designed to promote intergroup contact, to assess the extent to which the resulting contact was generalizable to other outgroup members, and finally to assess the extent to which the positive contact effect was mediated by cultural stereotypes, cultural knowledge and cultural openness. Nesdale and Todd (2000) chose one of the halls of residence to run an intervention program, while three other halls were used as comparison groups. The program of activities for the intervention hall included social, recreational and academic (tutorials) activities that facilitated intercultural contact. The students filled out a series of questionnaires measuring intercultural contact, intercultural acceptance, intercultural knowledge, and cultural openness.

Interestingly, while the intervention worked among the Australian students, it did not have the same effect on international students. Australian students living in Hall “I” reported significantly greater intercultural contact within the hall, more intercultural knowledge and openness than did the Australian students in the other residence halls. In addition, both the international students and the Australian students in Hall “I” showed more interest in promoting contact between the two groups, than students in the other halls. International students showed no difference in intercultural knowledge and openness. The researchers explained this difference between Australian and International students by suggesting that international students arrived in Australia with greater intercultural knowledge and openness to begin with, and with a greater desire for intercultural interaction. Because the international students started from a higher base, the intervention failed to reveal an impact (Nesdale & Todd, 2000).

Previous research on the contact hypothesis suggests that contact improves intergroup relations (Nesdale & Todd, 2000; Pettigrew & Tropp, 2006). Certainly, it is possible that this is, in part, because of a reduction in perceived prejudice both against the self and the international students group. An international student who experiences frequent and cooperative contact with domestic students will have more chances to understand their differences and even find ways to communicate better and more efficiently with domestic students. Positive and frequent contact with domestic students could relate to international students having positive experiences with domestic students and reporting less perceptions of prejudice. It is expected that contact will predict international students’ personal and group perceptions of prejudice.

*Individual differences, intergroup contact, and attitudes.* A very interesting study by Dhont and Van Hiel (2009) looked at the effects of intergroup contact among low and high-scoring authoritarians. The researchers wanted to examine the effect of free-choice intergroup contact and right-wing authoritarianism on racial prejudice. They expected a negative relationship between right-wing authoritarianism and intergroup contact. In addition, they tested two competing hypotheses. The first hypothesis proposed that contact would be beneficial for low scoring authoritarians, while the second hypothesis proposed that the most positive effects would be obtained with high scoring authoritarians. Participants filled out measures of authoritarianism, racism, and intergroup contact with immigrants. The intergroup contact measure assessed both the amounts of negative and positive contact. As expected, negative contact positively correlated with right-wing authoritarianism, indicating that the higher an individual was on right-wing authoritarianism, the more negative contact with immigrants he/she reported and vice versa. In addition, positive contact with immigrants was negatively correlated with right-wing authoritarianism, in such a way that the more positive contact an individual reported the lower he/she scored on right-wing authoritarianism and vice versa. According to Dhont and Van Hiel (2009), authoritarian individuals are likely to have less contact with outgroup members and therefore the positive effects of contact might be absent for them. Finally, support was found for the second hypothesis, which stated that positive intergroup contact was related to racism, but this was only true among high scoring authoritarians. The benefits of contact and friendship on attitudes of high scoring authoritarians were also examined by Hodson, Harry, and Mitchell (2009), who found that individuals who were high on right-wing authoritarianism expressed significantly

less negative attitudes toward homosexuals. Their attitudes extended to experiencing more contact, more quality of contact and reporting more direct and indirect friendships.

Jackson and Poulsen (2005) tested a model that suggested that individuals who were especially open and agreeable would be more likely to initiate intergroup contact and interpret contact experiences favourably. They proposed the concepts of situational selection and situational evocation. Situational selection stated that individual characteristics, such as openness to experience, influence the situations that individuals look for and welcome in their lives. On the other hand the concept of situational evocation suggested that individuals, because of their personality, may change the social situations they are in, even only by their own presence. An individual high in openness to experience would be more likely to look for more intergroup contact experiences and be able to encourage favourable interactions with members of an outgroup. Moreover, an individual who is low on openness to experience would not only be less likely to seek out experiences involving contact with the outgroup, but in the rare situation where contact is unavoidable, the individual would find a way to experience this situations as unpleasant (Jackson & Poulsen, 2005). The model was tested on two outgroups: 1) African Americans, and 2) Asian Americans. Openness and agreeableness were predicted to be related to expressions of prejudice and that those relationships would be mediated by favourable contact experiences with outgroup members. The authors found that openness was significantly associated with both frequency ( $r = .26, p < .05$ ) and quality of contact ( $r = .32, p < .05$ ) and that contact experiences significantly mediated the relationship between the Big Five personality traits and attitudes towards African Americans and Asian Americans. Therefore, individuals high on openness also have intergroup contact and



evoke positive experiences during that contact, which also relates to more positive attitudes toward African Americans and Asian Americans.

In another study, Ekehammar, Akrami, Gylje and Zakrisson (2004), examined different causal models of prejudice. Amongst the models, the relationship of right-wing authoritarianism and the Big Five Personality factors was examined. They suggested a causal model in which the Big Five Personality factors affect right-wing authoritarianism, and then right-wing authoritarianism affects prejudice. More specifically, they suggested that the personality factors of Conscientiousness, Extraversion and Openness to Experience would relate to right-wing authoritarianism. The study involved 183 non-psychology university students at a Swedish University. The participants completed measures such as the big five inventory, right-wing authoritarianism scale, the modern racial prejudice scale, the Swedish modern sexism scale, and the social desirability scale. The researchers found that right-wing authoritarianism displayed the largest direct total effect on prejudice while openness to experience showed the largest indirect effect on prejudice through right-wing authoritarianism.

Previous mediation models (Ekehammar et al., 2004; Jackson & Poulsen, 2005) were examined in the present study in an effort to replicate the results in the area of perceptions of prejudice. Based on Jackson and Poulsen's model, the present study examined whether an international student who is high on right-wing authoritarianism, might see the world as more "dangerous" and therefore might be more reserved to engage in any contact with domestic students, resulting in perceiving more prejudice both against the self and the group of international students. On the other hand, based on Ekehammar et al. (2004), the present study examined a model suggesting that an international student

who is open to experience, might score lower on right-wing authoritarianism, seeing the world as friendly, and consequently might perceive less prejudice around campus.

### *Perceptions of Prejudice and Group Identification*

The concept of group identification and specifically the minimal group paradigm was first presented by Tajfel, Billig, Bundy and Flament (1971) at the University of Bristol. The researchers tried to discover the baseline conditions in which individuals discriminate the outgroup and favour the ingroup, first by randomly assigning participants into one of two groups and then after informing them of their group membership asking them to allot money in the form of points to two other members of the two groups. The findings showed that participants favoured the members of their ingroup against the members of the outgroup, and that those favourable behaviours still existed even when the alternative strategy was to act in terms of the greatest common good (Tajfel et al., 1971).

*Social Identity Theory and Motivation.* Based on the findings of the minimal group paradigm Tajfel and Turner went on to formulate Social Identity Theory. Tajfel (1981) defined social identity as “that part of an individual’s self concept which derives from his knowledge of his membership of a social group together with the value and emotional significance attached to that membership” (p.255). Social identity theory involved three psychological processes; social categorization, social identity and social comparison. According to Tajfel and Turner (1986) the portion of the self-concept that reflects the groups to which one belongs is that individual’s social identity. Moreover, individuals can think about the self and others in a way that emphasizes group membership rather than personal qualities (social categorization) and tend to compare their own group to any

other groups that seem relevant (social comparison). If dissatisfied with a particular social identity, individuals could choose between three strategies to improve their social identity; social mobility, social competition and social creativity. The social mobility strategy involved an individual feeling poorly about their group because the group membership created negative outcomes in their life. If an individual felt that their membership in a group is what created problems such as prejudice against them, he/she would try joining a new better group, or trying to identify less with the ingroup and focus on other better groups to which he/she belonged. In the case of international students, social mobility could work as following. An international student perceiving prejudice against his/her self, and the group of international students, would be more motivated to identify less with the group of international students, and would try to identify more with the more general group of university students, focus more on that identity in order for him/her to improve his/her social identity. On the other hand, in social competition if an individual feels that his/her ingroup is inferior, the individual will try to improve his/her ingroup and attack the outgroup. Lastly, the social creativity strategy entails an individual using a variety of “mental tricks” that could help him/her feel better about the ingroup.

Social Identity Theory proposed that discriminatory behaviour is related to the degree of ingroup identification and to the achievement or maintenance of a positive social identity. Tajfel (1978) also suggested that a group identity could be imposed ‘from the outside.’ Perceiving the self and others as facing a common negative treatment could, therefore, create a minority group identity. According to social identity theory individuals are motivated to identify themselves as members of a group because of their need for coherence and to enhance their self-esteem. Individuals strive to identify themselves as

group members to avoid uncertainty about who they are, how they should behave, and even how outgroups will behave towards them. Being a member of a group has an influence on an individual's perceptions, attitudes, and behaviours. On the other hand, enhancement of self-esteem is about individuals striving to feel good about themselves in comparison to others (Hornsey & Hogg, 2000).

During the 1990s Hogg revisited social identity's motivation to achieve coherence and introduced the idea of uncertainty reduction. According to Hogg and his colleagues, the motivation to decrease uncertainty in life was a good explanation on why we need to maintain social identities. Identification with a group is important because it offers a social field that provides structure and prescribes how individuals should act, feel and behave (Hogg & Abrams, 1993; Hogg & Mullin, 1999). Based on the above ideas, international students perceiving prejudice against the self and the group of international students, maybe because they would feel bad about what their identity as international students entailed, would be motivated to use the strategy of social mobility, identifying less with the international students group, to identify with the more positive group of university students.

The present study examined a model based on the motivational need to attain a more positive social identity as suggested by the social identity theory. More specifically, the present study examined the relationship between perceptions of prejudice against the self and the group and identification with the group of university students, and how a student might switch from identifying more with the international students group to identifying more with the university students group. The more prejudice a student perceived, the

more he/she would identify with the university students group or the less he would identify with the international students group.

*The cognitive nature of self-categorization theory and the rejection-identification model.* Turner, Hogg, Oakes, Reicher and Wetherell (1987) further explored the process of social categorization and focused more on the cognitive element of social identity by creating the self categorization theory. According to self categorization theory, categorization of the self and the others into ingroup and outgroup defines an individuals' social identity and highlights both perceived similarities between ingroup members and perceived differences between members of different groups. The most prominent feature of self categorization theory was the idea of depersonalization. Individuals perceived and acted as embodiments of the relevant ingroup prototype rather than as unique individuals. Through this process of depersonalization, individuals transform into group members and individuality into group behaviour. While social identity theory talked about why individuals need to have social identities, self-categorization theory focused more at the cognitive nature of categorization and its importance in producing group behaviours. According to Turner and his colleagues (1987) a feeling of group identity could come forth when self categorization at the group level appeared to be a relevant way to organize and make sense of a social situation. Self categorization theory postulates that international students perceiving negative treatment from domestic students are more likely to define themselves as international students because the differences between international students could be perceived as minimal when compared to their collective differences from domestic students of the university. Even though international students do not share the same home country, they have one thing in common; they are seen as

foreigners by the domestic students (Schmitt et al., 2003). It makes more sense to categorize themselves as international students and to create an identity based not on who they are, but on who they are not.

Branscombe, Schmitt and Harvey (1999) further examined an individual's identification with group, especially in groups that perceive prejudicial attitudes by the outgroup. The researchers hypothesized that stable attributions to prejudice would positively influence minority group identification and that identification would then positively relate to well-being. To be more precise, Branscombe and her colleagues expected that individual differences in the willingness to make attributions to prejudice for situations faced in the past and for events that someone might come across in the future, will have a harmful effect on the individual's well-being. Moreover, they suggested that individual differences in attributions to prejudice across a range of situations will increase both identification with one's minority group and hostility towards Whites. African-American participants completed measures such as the attributions to prejudice across a variety of situations scale, past experience with racial discrimination scale, personal and collective well-being scales. Indeed, the results of the study supported the hypotheses and evidence was found that stable attributions of prejudice have a direct harmful effect on well-being while increasing minority group identification and hostility towards the outgroup. Based on the above, the rejection-identification model claimed that while perceiving prejudice has psychological costs, those costs are reduced by an increased identification with one's minority group.

A few years later, Branscombe and her colleagues (Schmitt, Spears, & Branscombe, 2003), re-examined the rejection-identification model by looking at the case of

international students. They suggested that perceptions of prejudice could create a sense of group identification even with a group that had no pre-existing history, in that case the group of international students. The researchers believed that the common treatment international students face could serve as a basis for group formation and the construction of a new group identity. According to their theory, international students who perceived discrimination had at least two potential identities to turn to in response to discrimination. They could identify even more with their home country or with the group of international students. Because members of a student's home country would not share the experience of being a minority in the university setting, the student would then turn to the more relevant group of international students. Other international students would be more likely to share the student's experience of being treated as an outsider in the university setting. The researchers tested the rejection-identification model by asking 99 international students at the University of Kansas to participate in their study. Participants were asked several demographic questions concerning their origin, time spent in the USA, etc. In addition, they measured participants perceived prejudice and discrimination, group identification, and self-esteem. The results supported the rejection-identification model. Identification with the students' national group did not suppress the costs of perceiving discrimination on their self-esteem. National identification was not related to perceptions of discrimination. On the contrary, perceived discrimination increased identification with the group of international students and positively predicted self-esteem.

The current study examined a model based on the cognitive nature of the self-categorization theory and the rejection-identification model that suggest that individuals

categorize the self in groups in order to make sense of the situation. To be specific, an international student perceiving prejudice by domestic students, might rather identify more with the international students group or his/her own national group rather than the group of university students. An international student could make this identification choice because thinking about his/her negative experiences with domestic students would cognitively make more sense to identify with a group that shares those experiences with him/her. Therefore, an international student perceiving prejudice against his/her self and his/her national group or the group of international students, might identify more with those groups rather than the university students group. Other international students or students sharing the same nationality would have more things in common, since they are also too in the same situation (perceiving prejudice), on the contrary to the group of university students which includes domestic students as well.

### Present Study

What influences international students' perceptions of prejudice? Certainly, there are numerous possible candidates, including individual differences in stigma vulnerability, right-wing authoritarianism and openness to experience, as well as contextual variables, such as frequency and quality of contact with individuals in other groups. Research on stigma vulnerability has shown that students differ in their tendency to attribute negative outcomes to prejudice (Gilbert, 1998). In addition, previous studies confirmed the positive effects of contact on group relations (Berryman-Fink, 2006; Nesdale & Todd, 2000; Pettigrew, 1997, 1998; Pettigrew & Tropp, 2006). Research looking at prejudice has found that individual differences such as openness to experience and right-wing authoritarianism influence the degree to which an individual is prejudiced against



members of several outgroups (Altemeyer, 1996, 2004; Ekehammar et al., 2004; Flynn, 2005; Haddock, Zanna, & Esses, 1993). High authoritarian individuals tend to think and organize their worldviews in terms of ingroups and outgroups, which could explain a possible relationship between international students' perceptions of prejudice and right-wing authoritarianism. In addition, individuals high on openness to experience can easily adjust to new situations, and that could translate in a relationship between openness to experience and international students' perceptions of prejudice. The current study explored the relation of openness to experience and right-wing authoritarianism, stigma vulnerability and quality and quantity of contact with international students' personal and group perceptions of prejudice. As well, two opposing models of how perceptions of prejudice might affect the students' identification choices were compared. The first model (social identity theory) was based on the motivational need to attain a more positive social identity, specifically through a strategy known as social mobility (Tajfel & Turner, 1986). The second model (based on the cognitive nature of self-categorization; Turner et al., 1987 and the rejection-identification model; Schmitt et al., 2003) suggested that individuals categorize the self in groups in order to make sense of the situation.

In addition, two mediation models were tested to explore the relationship between individual differences, contact and perceptions of prejudice further, by replicating previous research results (Ekehammar et al., 2004; Jackson & Poulsen, 2005).

### *Hypotheses*

*Predicting Personal and Group Perceptions of Prejudice.* Stigma vulnerability (PPAS), individual differences (right-wing authoritarianism, and openness to experience) and contact (quantity and quality of contact) were expected to predict perceptions of

prejudice against the self and the group (Hypothesis 1). In addition, the following relationships were expected; the higher an international student was in stigma vulnerability, or right-wing authoritarianism the more prejudice he/she would perceive. On the other hand, the higher an international student was on openness to experience, the more frequent and cooperative contact he/she reported, or the less perceptions of prejudice he/she would perceive.

*Predicting Group Identification.* Further it was predicted that perceptions of prejudice would predict group identification (national group, international students group, and university students group). Two specific models (Tajfel & Turner, 1986; Turner et al., 1987; Schmitt et al., 2003) were explored: 1) the self-categorization/rejection-identification model and 2) the social mobility model. If international students followed the principles of the social mobility model (Hypothesis 2a), it would be expected that feeling poorly about their international and national identity will relate to their perceptions of prejudice. International students would be motivated to focus on other groups they belong to, such as the university student group. Therefore, perceptions of prejudice would relate to identification with the university student group. The more perceptions of prejudice a student reported, the more he/she identified with the university student group.

However, if international students follow the assumptions of self-categorization/rejection identification model (Hypothesis 2b), it would be expected that if the prejudice they perceive is based on their membership in the international students and/or national group, perceptions of prejudice will predict identification with the international students and national group. In addition, identifying with the international students and/or national

group will relate to perceptions of prejudice. Furthermore, if international students think that domestic students are prejudiced against all students who are not domestic, the more they will identify with the international student group which will positively relate to perceptions of prejudice.

*Correlations.* It was hypothesized that right-wing authoritarianism would be negatively correlated with openness to experience, quantity and quality of contact and positively correlate with stigma vulnerability. Moreover, it was expected that openness to experience would negatively correlate with stigma vulnerability (PPAS) and positively correlate with quantity and quality of contact. Furthermore, personal and group perceptions of prejudice should correlate positively with stigma vulnerability and negatively with quantity and quality of contact. The more personal and group perceptions of prejudice an international student reported the more he/she would attribute negative outcomes to prejudice. On the other hand, the more personal and group perceptions of prejudice an international student reported, the less frequent and less cooperative contact he/she would report.

Finally it was hypothesized that personal perceptions of prejudice and group perceptions of prejudice would be positively correlated. The more personal perceptions of prejudice an international student reported, the more group perceptions of prejudice he/she would report.

*Mediation Models.* Following Jackson and Poulsen's model, it was hypothesized that contact would mediate the relationship between openness to experience and perceptions of prejudice. Similarly, contact would mediate the relationship between right-wing authoritarianism and perceptions of prejudice. An international student who is high on

right-wing authoritarianism will see the world as more “dangerous” and therefore will be more reserved to engage in any contact with domestic students, resulting in perceiving more prejudice both against the self and the group of international students. Moreover, a mediation model based on Ekehammar’s results was tested, hypothesizing that right-wing authoritarianism would mediate the relationship between openness to experience and perceptions of prejudice. An international student who is open to experience, will score lower on right-wing authoritarianism, seeing the world as friendly, and consequently will perceive less prejudice around campus.

## Methods

### *Recruitment*

Participants were recruited by placing notices about the study at Brock University, placing information about the study in various student online forums, and through e-mail sent to international student organizations in both Europe and North America. Individuals who were interested in participating were asked to email the researchers. Participants were informed about the confidentiality of their individual responses and about their right to withdraw from the study at any time they wished to do so. If they agreed to participate, participants were emailed information on how to access the questionnaires on the Psychology Department Website where they were able to create an account and complete the questionnaires. All measures were written in the English language.

### *Procedure*

Participants who agreed to participate signed up on the Brock University Psychology Department Website and chose the study titled “International Students’ Personality Characteristics and Experiences in University.” Participants were able to read the consent form (*see Appendix A*) and if they agreed to continue with the study they completed the questionnaires. Participants could choose not to answer any item they did not want to answer. At the end, participants read the debriefing form (*see Appendix B*).

### *Participants*

Participants were 98 international students who took part in a study looking at “International Students’ Personality Characteristics and Experiences in University”. Participants ages ranged from 19 years to 35 years ( $M = 25.19$ ,  $SD = 3.53$ ). They were from different countries of Europe, Asia, North America, South America and Oceania.

They attended university mainly in the United Kingdom, Canada and the United States of America. Table 1 presents the demographic characteristics of the international students participating in the study.

Table 1  
Demographic Characteristics of International Students (N= 98)

Variable	n	%
<b>Sex</b>		
Male	32	32.65
Female	65	66.33
Unknown	1	1.02
<b>Origin</b>		
Europe	<b>52</b>	53.06
Male	20	
Female	32	
Asia	<b>24</b>	24.5
Male	10	
Female	14	
North America	<b>12</b>	12.24
Male	2	
Female	10	
South America	<b>3</b>	3.06
Male	0	
Female	3	
Oceania	<b>2</b>	2.04
Male	0	
Female	2	
Unknown	<b>5</b>	5.10
Male	1	
Female	4	
<b>Place of Study</b>		
United Kingdom	<b>31</b>	31.63
Male	9	
Female	22	

Variable	n	%
Canada	20	20.41
Male	8	
Female	13	
United States of America	17	17.35
Male	4	
Female	13	
Other European Countries	19	19.39
Male	9	
Female	10	
Asia	3	3.06
Male	2	
Female	1	
Oceania	2	2.04
Male	0	
Female	2	
Unknown	6	6.12
Male	2	
Female	4	
<b>Time in Place of Study</b>		
0-2 years	39	39.80
2-4 years	31	31.64
4-6 years	8	8.16
6-8 years	7	7.14
> 8 years	6	6.12
Unknown	7	7.14

### *Materials*

*Demographic Information (see Appendix C).* Participants were asked to indicate their sex, age, nationality, the country of study, whether they attended international and/or general orientation, year of study in University, and time in the country of study. In addition, participants were asked two more questions concerning personal discrimination

on campus: first, they were asked if they had ever reported any incident of discrimination to the relevant authorities and second, if they had ever thought of reporting an incident of discrimination.

*Prejudice Perception Assessment Scale (see Appendix D).* A modification on the Prejudice Perception Assessment Scale (PPAS) developed by Gilbert (1998) was used to measure stigma vulnerability of international students. Previously the scale had shown an overall reliability coefficient of .84 (Gilbert, 1998). The scale consisted of 5 vignettes design to assess the extent to which international students attributed negative, interpersonal feedback to prejudice in ambiguous situations. Participants responded to each vignette using a 7 point-Likert scale (-3 “extremely unlikely”, +3 “extremely likely”). The scale consisted of five hypothetical situations that ended with a negative outcome for a hypothetical international student. Situations included receiving a low grade, visiting a professor’s office, and looking for a roommate. The following is one of the vignettes presented in the scale:

*“It is the first day of class for the spring semester and your first class is being held in a large auditorium. You arrive and take a seat in the front of the room next to a student, who happens to be White. You notice the student is looking around and then, right away, the student gets up and moves to another seat. You do not notice where the student sits, but you are wondering why the student decided to move to another seat. In your opinion, the likelihood that this event has happened because the White student is prejudiced against African Americans is...”*

Even though the situation is ambiguous and one cannot say with certainty whether the student moved to another seat because of prejudice or because of other reasons,



respondents differ on the extent to which they think the student moved to another seat because of prejudice, indicating stronger or weaker tendencies toward stigma vulnerability.

Scores on the PPAS were reversed coded, such that higher scores reflected a higher tendency to attribute negative feedback to prejudice.

*Right-Wing Authoritarianism Scale.* A scale based on Altemeyer's constant twelve items (Altemeyer, 1996) was used. Previous studies using the full 30 item version of the RWA showed a mean inter-item correlation of .29 and an alpha of .92 (Altemeyer, 2001). Participants responded to each item using a 7 point-Likert scale (1 "strongly disagree", 7 "strongly agree"). The scale consisted of items such as "What our country really needs, instead of more 'civil rights' is a good stiff dose of law and order", and "Gays and lesbians are just as healthy and moral as everybody else"(reversed keyed).

*Openness to Experience Scale.* To measure openness to experience, the 32 openness items from the Hexaco-PI-R developed by Lee and Ashton (2004) were administered. Participants responded to each item using a 5 point-Likert scale (1 "strongly disagree", 5 "strongly agree"). The measure previously showed good internal consistency reliability with a coefficient alpha of .90 (Lee & Ashton, 2004). The scale consisted of items such as "I am interested in learning about the history and politics of other countries" and "I like people who have unconventional views."

*Quantity of Contact Scale (see Appendix E).* This measure was created based on items by Voci and Hewstone (2003). The scale consisted of 4 items measuring quantity of contact with domestic students (Cronbach's Alpha= .89). Participants responded to two items using a 7 point-Likert scale and to two items based on a 10 point-Likert scale.

Items included questions such as “How often do you have contact with domestic students?”. To calculate the quantity of contact score, items were standardized and a z-mean score was calculated.

*Quality of Contact Scale (see Appendix F).* The scale was based on two items by Voci and Hewstone(2003).The scale showed a Cronbach’s Alpha = .61 which is likely accounted for by the small number of items. Items were such as “When you meet domestic students, do you find the contact superficial or insincere?” (reverse-keyed). Obtaining a high score on this scale meant that the student reported more cooperative and positive contact.

*International Student Personal Perceptions of Prejudice Scale (see Appendix G).* Participants were asked to respond to a four-item measure based on Carvallo and Pelham’s (2006) *perception of personal discrimination measure*. Items were measured on a 9 point-Likert scale (1 “strongly disagree”, 9 “strongly agree”). The scale previously showed a high reliability with a Cronbach’s alpha = .90. The scale included items such as “I have personally experienced discrimination as an international student” and “Prejudice against international students has affected me personally.”

*International Student Group Perceptions of Prejudice Scale (see Appendix H).* Participants were asked to respond to a four-item measure based on Carvallo and Pelham’s (2006) *perception of group discrimination measure*. Items are measured on a 9-point scale ranging from 1 (strongly disagree) to 9 (strongly agree). Carvallo and Pelham’s scale had a Cronbach’s alpha = .92. The scale included items such as “Prejudice against international students has affected the average international student” and “The average international student has experienced discrimination.”

*Group Identification Scale (see Appendix I).* A measure based on Hodson and Esses (2002) group identification scale ( $\alpha = .83$ ; adapted from Luhtanen & Crocker, 1992; Phinney, 1992; Sellers, Smith, Shelton, Rowley, & Chavous, 1998) was used. Participants were asked to respond to three variations of the scale. The first one assessed their identification with International students, the second, identification with ones' National group and the third, identification with University students. All three measures were based on a 7 point-Likert scale (1 "not at all", 7 "very much so"). Items included in the measures were such as "To what extent is the membership in the international students group an important part of your identity?", "To what extent do you feel that you have a lot in common with members of your own 'national' group?"

## Results

### *Descriptive Statistics*

Means, standard deviations and internal consistency coefficients (Cronbach's  $\alpha$ ) for all variables in the study appear in Table 2.

Table 2  
Means, standard deviations and internal consistency coefficients

<b>Variables</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Internal consistency</b>
Stigma Vulnerability	4.73	1.08	0.74
Right-Wing Authoritarianism	2.61	1.16	0.88
Openness to Experience	3.68	0.42	0.85
Quantity of Contact	5.30	1.72	0.90
Quantity of Contact (Standardized)	0.01	0.86	
Quantity of Contact (Transformed)	0.59	0.20	
Quality of Contact	5.28	1.50	0.61
Personal Perceptions of Prejudice	3.09	2.33	0.89
Personal Perceptions of Prejudice (Transformed)	0.56	0.32	
Group Perceptions of Prejudice	3.47	2.23	0.96
Group Perceptions of Prejudice (Transformed)	1.79	0.54	
International Student Identification	3.4	1.73	0.88
National Identification	4.08	1.91	0.92
University Student Identification	4.34	1.59	0.86

### *Screening Data*

*Accuracy of Input, Missing Data, Distributions, and Univariate Outliers.* All variables were examined for missing data and univariate outliers, and none were found. Indices of skewness and kurtosis were examined to determine whether variables followed a normal distribution. Variables with skew and kurtosis values between -3 and +3 were considered normally distributed. Table 3 shows the Z-skew and Z-kurtosis values for all the variables in the study. Based on the skewness and kurtosis values, right-wing authoritarianism, openness to experience, stigma vulnerability, quality of contact, international identification, national identification and university identification appeared to follow a normal distribution. Quantity of contact, and personal perceptions of prejudice were both severely skewed, and group perceptions of prejudice was slightly skewed.

Table 3  
Z-skew and Z-Kurtosis for all variables in the study

Variable	Z-skew	Z-kurtosis
Stigma Vulnerability	-0.78	0.15
Right-Wing Authoritarianism	2.25	-1.06
Openness to Experience	-1.41	0.74
Quantity of Contact (Standardized)	<b>-5.50</b>	<b>3.03</b>
Quality of Contact	-2.19	-0.04
Personal Perceptions of Prejudice	<b>4.96</b>	1.32
Group Perceptions of Prejudice	<b>3.48</b>	0.12
International Student Identification	0.53	-1.73
National Identification	-1.56	-1.22
University Student Identification	-0.49	-1.09

Histograms of all variables were also examined for normality. All variables showed a normal distribution with three exceptions: Quantity of Contact, Personal Perceptions of Prejudice and Group Perceptions of Prejudice.

The Quantity of Contact variable had a severe negative J-shaped distribution. Following Tabachnick and Fidell's (2007) recommendations, the variable was transformed by reflecting and inverting the data. Reflecting was achieved first by finding the largest score in the distribution and adding one to it to form a constant. Then the new variable was created by subtracting each score from the constant. Following the transformation, z-skew was decreased significantly, from -5.50 to -0.31. Since the values of the quantity of contact variable were reflected, the correlation and regressions signs concerning quantity of contact were reversed for ease of interpretation.

The Personal Perceptions of Prejudice variable also appeared to be departing from normality. The variable had a severe positive L-shaped distribution that led to its transformation. Again, based on recommendations by Tabachnick and Fidell (2007), Personal Perceptions of Prejudice data were inversed. Following this transformation, the variable's skewness decreased from 4.96 to 1.04.

Finally, the Group Perceptions of Prejudice variable was slightly skewed, and therefore underwent a square root transformation (Tabachnick & Fidell, 2007). After the transformation, the z-skew of Group Perceptions of Prejudice decreased from 3.48 to 1.31.

*Multivariate Outliers.* The data were screened for multivariate outliers through the SPSS regression procedure. The criterion for multivariate outliers was Mahalanobis distance at  $p < .001$ . The Mahalanobis distances were evaluated as  $\chi^2$  with degrees of

freedom equal to the number of variables, therefore any case with a Mahalanobis distance greater than  $\chi^2(10) = 29.59$  was a multivariate outlier. No multivariate outliers were found.

*Multicollinearity.* Multicollinearity was examined through the SPSS statistics collin procedure. No dimension had more than one variance proportion greater than .50, indicating that there were no issues with multicollinearity.

### *Main Analyses*

A series of multiple regressions was performed to test hypotheses. Results were interpreted keeping in mind the transformations made on the three variables (Quantity of contact, personal perceptions of prejudice, and group perceptions of prejudice).

*Multiple Regression Predicting Personal Perceptions of Prejudice.* A standard multiple regression was performed predicting Personal Perceptions of Prejudice from right-wing authoritarianism, openness to experience, stigma vulnerability, and quantity and quality of contact.

Table 4 displays the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients ( $\beta$ ), the semipartial correlations ( $sr_i^2$ ),  $R^2$ , and adjusted  $R^2$ .

The multiple correlation was significantly different from zero,  $F(5,88) = 4.43, p < .001$ , with  $R^2$  at .20. The adjusted  $R^2 = .16$  indicates that 16% of the variability in personal perceptions of prejudice was predicted by stigma vulnerability, right-wing authoritarianism, openness to experience, quantity and quality of contact. Stigma vulnerability and quality of contact were the two significant predictors in the regression.

Table 4  
Standard Multiple Regression Predicting Personal Perceptions of Prejudice

Variables	B	$\beta$	$sr^2$
PPAS	0.13**	0.45	0.11
RWA	0.04	0.16	0.01
OE	-0.02	-0.03	0.00
QTC	-0.10	-0.06	0.00
QLC	0.03	0.18	0.02
Intercept = -0.24			
$R^2 = .20$ Adjusted $R^2 = .16$ $R = .45^{**}$			
** $p < .01$ , * $p < .05$ Unique variability = 0.18; shared variability = .04 Note: Personal perceptions of prejudice = PPP Stigma vulnerability = PPAS Openness to Experience = OE Quantity of Contact = QTC Quality of Contact = QLC			

This result lends partial support for the first hypothesis. The combination of the predictors was related to an international student's personal perceptions of prejudice. Moreover, stigma vulnerability was a unique predictor for personal perceptions of prejudice. An international student's tendency to attribute negative feedback to prejudice positively relates to the student's personal perceptions of prejudice.

*Multiple Regression Predicting Group Perceptions of Prejudice.* A standard multiple regression was performed with group perceptions of prejudice as the dependent variable and right-wing authoritarianism, openness to experience, stigma vulnerability, quantity of contact and quality of contact as the independent variables. Table 5 displays the



unstandardized regression coefficients (B) and intercept, the standardized regression coefficients ( $\beta$ ), the semipartial correlations ( $sr_i^2$ ),  $R^2$ , and adjusted  $R^2$ .

Table 5  
Standard Multiple Regression Predicting Group Perceptions of Prejudice

Variables	B	$\beta$	$sr^2$
PPAS	-0.32**	-0.57	0.22
RWA	-0.07	-0.15	0.01
OE	-0.06	-0.04	0.00
QTC	-0.79*	-0.29	0.08
QLC	-0.01	-0.03	0.02
Intercept = 3.31			
$R^2 = .30$ Adjusted $R^2 = .26$ $R = .55^{**}$			
** $p < .01$ , * $p < .05$ Unique variability = 0.28; shared variability = .04 Note: Group perceptions of prejudice = GPP Stigma vulnerability = PPAS Openness to Experience = OE Quantity of Contact = QTC Quality of Contact = QLC			

The overall model was found to be significant,  $F(5, 86) = 7.44, p < .001$ , with  $R^2$  at .30. The adjusted  $R^2 = .26$  indicates that 26% of the variability in group perceptions of prejudice was predicted by stigma vulnerability, right-wing authoritarianism, openness to experience, quantity of contact and quality of contact. The size and direction of the relationships supported hypothesis 1. Only stigma vulnerability uniquely predicted group perceptions of prejudice. An international student's tendency to attribute negative feedback to prejudice positively related with the student's group perceptions of prejudice.

*Multiple Regression Predicting International Student Identification.* A standard multiple regression was performed with international identification as the dependent variable and personal perceptions of prejudice and group perceptions of prejudice as the independent variables. Table 6 displays the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients ( $\beta$ ), the semipartial correlations ( $sr_i^2$ ),  $R^2$ , and adjusted  $R^2$ .

Table 6  
Standard Multiple Regression Predicting International Student Identification

Variables	B	$\beta$	$sr^2$
PPP	-1.64*	-0.31	0.09
GPP	-0.02	-0.01	0.00
Intercept = 4.42			
$R^2 = .09$ Adjusted $R^2 = .07$ $R = .30^{**}$			
$^{**}p < .01$ , $^{*}p < .05$ Unique variability = 0.10; shared variability = .02 Note: International Identification = Int. Group perceptions of prejudice = GPP Personal perceptions of prejudice = PPP			

Identification with the international students was predicted by the combination of personal and group perceptions of prejudice,  $F(2, 92) = 4.59$ ,  $p < .05$ , with  $R^2$  at .09. The adjusted  $R^2 = .07$  indicates that 7% of the variability in international identification was predicted by personal and group perceptions of prejudice. Group perceptions of prejudice did not contribute significantly to the regression. Therefore, the self-categorization/rejection-identification model was only supported for personal perceptions

of prejudice. An international student's personal perceptions of prejudice, positively related with identification with the international students group, which could suggest that perceiving a common negative treatment by the domestic students could in fact drive students to identify with the international student group.

*Multiple Regression Predicting National Identification.* A standard multiple regression was performed predicting national identification from personal perceptions of prejudice and group perceptions of prejudice as the independent variables.

Table 7 displays the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients ( $\beta$ ), the semipartial correlations ( $sr_i^2$ ),  $R^2$ , and adjusted  $R^2$ .

Table 7  
Standard Multiple Regression Predicting National Identification

Variables	B	$\beta$	$sr^2$
PPP	-0.74	-0.13	0.02
GPP	0.38	0.11	0.04
Intercept = 3.83			
$R^2 = 0.04$			
Adjusted $R^2 = 0.02$			
$R = 0.21$			
Note: National Identification = Nat.			
Personal Perceptions of Prejudice = PPP			
Group Perceptions of Prejudice = GPP			

The regression model was nonsignificant,  $F(2, 92) = 2.17, p = .12$ . Neither personal perceptions of prejudice nor group perceptions of prejudice uniquely predicted national identification.

*Multiple Regression Predicting University Student Identification.* A standard multiple regression was performed with university identification as the dependent variable and personal perceptions of prejudice and group perceptions of prejudice as the independent variables. Table 8 displays the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients ( $\beta$ ), the semipartial correlations ( $sr_i^2$ ),  $R^2$ , and adjusted  $R^2$ .

Table 8  
Standard Multiple Regression Predicting University Student Identification

Variables	B	$\beta$	$sr^2$
PPP	1.33	0.27	0.01
GPP	0.70	0.24	0.01
Intercept = 2.35			
$R^2 = 0.05$			
Adjusted $R^2 = 0.03$			
$R = 0.22$			
Note: University Identification = Uni.			
Personal Perceptions of Prejudice = PPP			
Group Perceptions of Prejudice = GPP			

The regression equation was not significant,  $F(2, 92) = 2.41, p = .09$ . No variability was uniquely predicted from either personal perceptions of prejudice or group perceptions of prejudice. No support for the social mobility model was found.

### *Mediation Analyses*

To test the hypotheses regarding mediation, a series of multiple regression analyses were conducted following the procedures outlined by Baron and Kenny (1986), to establish that a variable mediates a relationship. According to Baron and Kenny (1986) is to follow four steps. The first step is to show that there is a significant relationship

between the predictor and the outcome variable, by regressing the outcome variable on the predictor. The second step is that there should be a significant relationship between the predictor and the mediator, which is tested by regressing the mediator on the predictor. The third (and final) step is to demonstrate a significant relationship between the mediator and the outcome variable, which is tested by regressing the outcome variable simultaneously on both the mediator and the predictor. The last step is to establish that the mediator, completely mediates the relationship between the outcome variable and the predictor. If the path between the predictor and the outcome variable, when controlling for the mediator, is zero or non significant, then there is complete mediation. On the other hand, partial mediation occurs when the relationship between the predictor and the outcome variable is significantly less than when the mediator is not included in the equation, but the relationship between the predictor and the outcome variable is still significant.

The first step of the mediation analysis was not significant for either predictor (openness to experience and right-wing authoritarianism), indicating that there was no need for further analyses.

### *Correlational Analysis*

A correlational analysis was carried out to examine relationships between all variables. Table 9 shows all correlations.

Table 9  
Correlational Analysis

	1	2	3	4	5	6	7	8	9	10
1.RWA ---										
2. OE -0.22* ---										
3.PPAS 0.53** -0.04 ---										
4. QTC -0.19 0.21* -0.31** ---										
5. QLC -0.13 0.25* -0.31** 0.42** ---										
6. PPP 0.14 -0.10 0.43** -0.04 -0.39** ---										
7. GPP 0.19 -0.04 0.48** 0.10 -0.17 0.76** ---										
8. Int. 0.17 -0.04 0.25* -0.12 -0.29** 0.35** 0.16 ---										
9. Nat. 0.14 -0.19 0.15 -0.04 -0.16 0.29** 0.19 0.38** ---										
10.Uni. -0.20* 0.07 -0.29** 0.28** 0.27** -0.12 0.02 -0.11 -0.12 ---										

\*\*  $p < 0.01$ , two-tailed, \*  $p < 0.05$ , two tailed

Note: Right-wing authoritarianism = RWA

Openness to experience = OE

Stigma vulnerability = PPAS

Quantity of Contact = QTC

Quality of Contact = QLC

Personal perceptions of prejudice = PPP

Group perceptions of prejudice = GPP

International identification = Int.

National identification = Nat.

University identification = Uni.

As predicted the higher an international student scored on right-wing authoritarianism the lower he/she scored on openness to experience. On the other hand, the higher an international student was on right-wing authoritarianism, the higher he/she was on stigma vulnerability. In addition, the more open to experience an international student was, the more frequent and more positive contact he/she reported with domestic students.

Furthermore, the higher an international student was on stigma vulnerability attributing prejudice in ambiguous situations, the more personal and group prejudice he/she reported to perceive. Also, the more cooperative, positive contact (quality) an international student reported with domestic students, the less personal perceptions of prejudice he/she reported. As expected the more personal prejudice international students perceived, the more group prejudice they reported as well.

The correlational analysis did not support the social mobility model, as there were no significant relations between personal or group perceptions of prejudice and identification with the university students group. On the other hand, the self-categorization/ rejection-identification model was partially supported. Identification with the international students group and the national group positively correlated with personal perceptions of prejudice but no significant relationship was found with group perceptions of prejudice. The more a student identified with the international students group or his/her national group the more personal prejudice he/she perceived.

It is also worth noting that international identification negatively correlated with quality of contact. In other words, the more a student identified with the international students the more he/she found contact with domestic students to be negative (e.g. superficial, uncooperative). In addition, the more a student identified with the university student group, the less authoritarianism he/she exhibited, and the less he or she tended to attribute negative outcomes to prejudice (stigma vulnerability). In addition, the more identification with the university students an individual reported, the more frequent and cooperative the contact he/she reported with domestic students.

#### *Additional Analyses*

Further analyses were conducted to examine the personal/group discrimination discrepancy. According to Hodson and Esses (2002), the personal/group discrimination discrepancy refers to the phenomenon where individuals report greater discrimination at the group rather than personal level. To test this, a paired samples t-test was performed. The results showed a significant difference between personal prejudice perceptions and group prejudice perceptions. International students perceived more prejudice at the group level, than at the personal level, with  $t(95) = -2.11, p < .05$ . This finding supports the personal/group discrimination discrepancy phenomenon.

Additional independent samples t-tests were performed in order to examine the role of sex in perceptions of prejudice. Do men and women differ in the extent to which they perceive prejudice? Does the role of predictors such as contact, right-wing authoritarianism, openness to experience and stigma vulnerability differ among men and women? Past research by Levin, Sinclair, Veniegas, and Taylor (2002) looked at perceived discrimination among members with multiple group memberships. The researchers tested two competing predictions on the joint effect of sex and ethnic discrimination on perceived prejudice; the *double jeopardy hypothesis* and the *ethnic-prominence hypothesis*. The *double jeopardy hypothesis* stated that because ethnic minority women are targets of both sex and ethnic discrimination they will experience greater discrimination than ethnic minority men, or White women. The *ethnic-prominence hypothesis* stated that because of the role of ethnicity in the history of discrimination, women of colour will focus more on their ethnicity than on their sex when perceiving discrimination. Levin and her colleagues found support for the *ethnic-prominence hypothesis*. Latinas and African-American women showed no differences



from their male counterparts in expectations of general discrimination. In addition, their perceptions were affected by their ethnic group rather than their sex (Levin et al., 2002). No sex differences were found in stigma vulnerability, right-wing authoritarianism, openness to experience, contact, and perceptions of prejudice of international students. Most importantly, the fact that female and male international students did not show any significant differences in their perceptions of prejudice could lend support to Levin's (Levin et al., 2002) ethnic prominence hypothesis. Even though, ethnicity was not identified in the present study, the absence of any sex differences could mean that the perceptions of prejudice of female international students might be affected by their status as foreigners rather than their sex.

## Discussion

### *Summary of Purpose and Findings*

The present study had two main objectives. The first was to examine whether stigma vulnerability, contact (quantity and quality), and individual difference variables (right-wing authoritarianism and openness to experience) were predictive of perceptions of prejudice in international students. Findings indicate that, in combination, these variables were predictive of perceptions of prejudice against self and group. The second aim of this study was to determine whether these perceptions are predictive of group identification. More specifically, two competing models were evaluated, and results supported the self-categorization/rejection-identification model (Turner et al., 1987) over the social mobility model (Tajfel & Turner, 1986).

The first hypothesis was supported. As expected, the combination of these variables predicted perceptions of prejudice for self and group. Stigma vulnerability was a significant unique predictor for both personal and group perceptions of prejudice of international students. This finding is in accordance with previous research done by Crocker and Major (1989, 2003) and it provides support to the idea that international students perceiving prejudice might explain negative outcomes and events in their lives as being due to prejudice rather than making internal attributions. Previous research has shown that individuals tended to attribute negative feedback to prejudice (Crocker & Major, 1989; 2003) and more so when they are made to believe that they are competing or working with prejudiced individuals (Dion, 1975). The extent to which an international student attributes negative outcomes to prejudice could be a sign of their perceptions of prejudice. Attributing negative personal events to prejudice could severely influence an

individual's overall personal and group perceptions of prejudice. The amount of events an individual attributes to prejudice will positively relate to the perceptions of prejudice he/she reports. A possible reason why stigmatized individuals tend to make attributions of prejudice against their group as an explanation for negative interpersonal outcomes, could be to cope with prejudice and protect self-esteem (Crocker & Major, 2003).

Furthermore, both personal and group perceptions of prejudice were found to positively correlate with stigma vulnerability, such that the more personal and group perceptions of prejudice an international student reported, the more he/she tended to attribute negative events/outcomes on prejudice.

In predicting personal and group perceptions of prejudice, the contact variables also showed some interesting results. Quantity of contact was the unique contributor for group perceptions of prejudice.

When international students report their perceptions on group prejudice they seem to consider the amount of contact involved between them and domestic students. Therefore, spending more time interacting with domestic students and getting to know more domestic students can decrease their group perceptions of prejudice. This finding is in line with Pettigrew and Tropp's (2006) meta-analysis that found Allport's conditions not to be essential to improve negative attitudes towards outgroups. Increasing or introducing contact was enough to show a decrease in negative attitudes towards outgroups.

Similarly, the amount of contact between international and domestic students affected international students' group perceptions of prejudice. This finding is potentially important for research on contact and intergroup relations. International students who engage in frequent contact with domestic students could be willing to report less

perceived prejudice at the group level, but they need cooperative, meaningful contact in the form of friendship or meaningful interactions and relations in order to report less perceptions of prejudice at the personal level.

Although contact and stigma vulnerability affected perceptions of prejudice, the individual differences' variables were not unique predictors. Even though other relevant significant relationships emerged, individual differences alone could not uniquely predict perceptions of prejudice. The present study expected that the way high authoritarian individuals think of the world in terms of ingroup and outgroups, would present a significant relationship between right-wing authoritarianism and perceptions of prejudice, such as the more authoritarian an international student appeared to be and think of the domestic students as an outgroup, the more prejudice against the self and the international students group he/she would report. Future research could look at international students who are especially high on authoritarianism and investigate if the relationship between right-wing authoritarianism and perceptions of prejudice exists.

Even though the expected negative relation of right-wing authoritarianism with openness to experience and stigma vulnerability was found to be significant, the mediation analysis performed to test if right-wing authoritarianism mediates the relationship between openness to experience and perceptions of prejudice was nonsignificant. Ekehammar et al. (2004) found that openness to experience was related to right-wing authoritarianism, which in turn affected prejudice. In the case of the present study, the same could not be concluded about perceptions of prejudice. Future research could look further into this, and examine whether any indirect effects exist between the above variables.

Furthermore, openness to experience was positively correlated with both quantity and quality of contact. The higher an international student was on openness to experience, the more frequent and more cooperative contact he/she reported. However, the mediation analysis looking at contact as the mediator between openness to experience and perceptions of prejudice was not found to be significant. Previous research (Jackson & Poulsen; 2005) suggested that individuals who were especially open would initiate more contact and find this contact to be positive and cooperative. Again, while the present study could not find any direct effect between openness to experience and perceptions of prejudice, future research could test for any indirect effects among contact, openness to experience and perceptions of prejudice.

The second aim of this study was to test two different models of group identification as predicted by personal and group perceptions of prejudice. As mentioned, the present study sought to compare the Self-Categorization/Rejection-Identification model (Turner et al., 1987) to the Social Mobility model (Tajfel & Turner, 1986). In the present study, the Self-Categorization/ Rejection-Identification model was supported, while the Social Mobility model was not.

The self-categorization/rejection-identification model was based on the cognitive nature of the self-categorization theory that postulated that when facing prejudice, the international students group and the national group, would be the most relevant groups to that prejudice, and therefore international students would identify more with those groups. Categorizing the self into those two groups would be the most relevant way to organize and make sense of a social situation (Turner et al., 1987). In addition, personal

and group perceptions of prejudice against international students as a group related to the students' identification with their international students and national identity.

The analyses supported the self-categorization/rejection-identification model only for personal perceptions of prejudice. International identification was predicted by personal perceptions of prejudice and therefore personal perceptions of prejudice and international students' identification appeared to have a significant positive relationship. The more personal perceptions of prejudice a student reported the more he/she identified with the international student group. In addition, identification with the students' national group positively correlated with personal perceptions of prejudice in that the more a student identified with his/her national group, the more personal perceptions of prejudice he/she reported and vice versa.

The findings on international identification agree with those of Schmitt et al.(2003) who also found identification with the international student group to significantly relate to perceiving discrimination. However, Schmitt and his colleagues did not find any relation between identification with ones' national group and perceptions of prejudice.

The present study, however, assumed that the relationship between national group identification and perceptions of prejudice would exist as well, because students of national groups with a large number of students at the university could see that membership as a reason for their perceived prejudice. Students of national groups with small number of students at the university would choose the international student group to explain their perceptions of prejudice. Furthermore, adding more support to the ideas presented by the self-categorization/rejection-identification model, an inverse relationship was found between identification with the university students group and right-wing

authoritarianism and stigma vulnerability. What this means is that the lower a student scored on right-wing authoritarianism and the less he/she attributed negative outcomes to prejudice, the more he/she identified with the university students group. Moreover, the more a student identified with the university student group, the more cooperative and frequent contact he/she reported to have.

Schmitt et al. (2003) suggested that when perceiving prejudice, international students would turn to the relevant group of international students or identify more with that group to respond to the discrimination they experienced. Therefore, the results of the present study suggest that when students see prejudice not to be the source of negative outcomes, or when students experience frequent and meaningful contact with domestic students, they might also not feel the need to identify with international students or in other words, they might identify more with the group that offers these positive experiences; the group of university students. Even though, no causation can be assumed, the above results are very important in understanding relations between international students' perceptions and their choice of identification.

The social mobility model (based on social identity theory) states that when individuals feels poorly about their group, they will try to improve their social identity by identifying less with their group and trying to identify more with another group such as the university students group (Tajfel & Turner, 1986). No support was found for the social mobility model.

Along with the relationships posited by the two hypotheses, international identification was found to negatively correlate with quality of contact, such as the more

a student identified with the international students group, the more he/she found contact with domestic students to be superficial and uncooperative and vice versa.

In addition, a series of independent samples t-tests were conducted to explore any sex differences among international students' stigma vulnerability, openness to experience, right-wing authoritarianism, contact, perceptions of prejudice and group identification. No sex differences were found. Showing that female and male international students do not differ in their perceptions of prejudice lends support to the idea of ethnic-prominence hypothesis (Levin et al., 2002). Future research could look further into this result and examine if female international students who are visible as foreigners report more perceptions of prejudice than their male counterparts.

Finally, further exploratory analysis showed support for the personal/group discrimination discrepancy, with international students reporting more prejudice at the group level than at the personal level. This result follows previous findings (Hodson & Esses, 2002) supporting the personal/group discrimination discrepancy suggesting that international students tend to distance the self from negative attributes that may be associated with their group membership.

#### *Strengths, Limitations and Directions for Future Research*

The most important strength of the present study lies in the sample characteristics. Participants were recruited from all over the world. Participants were international students from Europe, Asia, North America, South America, and Oceania studying in universities in countries such as the United Kingdom, Canada, the United States, Belgium, France, Switzerland, Germany, Singapore, and South Korea. While previous research (Hanassab, 2006; Krahe et al., 2002; Nesdale & Todd, 2000) looking at



international students only focused on students from just one university, the present study offers a very diverse and generalizable sample of international students.

Moreover, the present study is the first study to examine stigma vulnerability, contact, right-wing authoritarianism, openness to experience, group identification, and perceptions of prejudice all together. While previous studies ventured to examine individual differences in people who have prejudicial attitudes, this is the first study to look at individual differences in a group who perceives prejudice. The present study in no way tries to blame the victim, but recognizes that certain individual characteristics such as right-wing authoritarianism and openness to experience could influence the way an international student experiences university and how much prejudice he/she perceives. The present study is not about whether international students perceive prejudice or not, or if they do perceive prejudice whether their perceptions are realistic or not. The present study's goal was to explore what influences international students perceptions of prejudice and how these perceptions relate to how students choose to identify at the group level.

Another strength of the present study is that it offers a direct comparison of the two models of group identification. This comparison gives a much clearer picture on why international students choose to identify with the international students group and sometimes their national group rather than the university students group. Based on the current results, future research could work on improving the international students' experience in university, perhaps by making them more aware of the university students' group. Helping them identify more with this group, could in turn allow them

more contact opportunities with domestic students and therefore reduce their perceptions of prejudice.

One limitation of the present study was the fact that 65% of the participants stated either countries in Europe, Canada or the United States as a place of origin. Previous research by Krahe et al. (2002) had found that *visibility* as a foreigner was an important predictor for prejudice and discrimination. In fact, foreign appearance predicted the level of perceived discrimination; the more clearly students were identified as foreigners, the more severe discrimination they reported. Based on these findings, one can gather that the reason behind the severe skewness of the personal and group perceptions of prejudice, and quantity of contact variables could be characteristics of the sample, such as not being visible as a foreigner. Even though skewness was dealt with by transforming the skewed variables, the results of the study could have been stronger if the sample showed more variability. On the other hand, the present study could be a fairer representation of international students. Most of the previous studies concerning international students (Crocker & Major, 1991; Krahe et al., 2002; Nesdale & Todd, 2000; Schmader et al., 2001) tend to focus more on visible minority groups, while the reality is that the population of international students included many foreign students that were not visible as foreigners. Other researchers could examine whether any differences exist between students who come from different countries or regions, or between students who are studying in different regions.

A further limitation of the present study is the correlational nature of the findings. While the results of this study can assume relationships between variables, no causation can be assumed.

Future research could also focus more on the characteristics of the international students group. As suggested by Krahe et al. (2002), visibility as a foreigner affected perceptions of prejudice. If indeed, international students who are not visible as foreigners enjoy more frequent and positive contact, and perceive less personal and group perceptions of prejudice as suggested by the histograms of the present study, then future research should be concerned about this. If indeed, this is the case, future research might not be talking about perceptions of prejudice, or prejudice against international students but only against certain ethnic groups.

Perhaps an additional limitation rests on the quality of contact scale. While originally the scale consisted of more items, a mistake when entering the questions on-line for the participants resulted in the scale having only two items. This was only discovered after the study was completed and therefore it was impossible to add more items. The small number of items on the scale resulted in a low Cronbach's alpha of .61. It is possible that this limitation may have affected the chances of finding existing relationships between quality of contact and other variables. The significant correlations between quality of contact and openness to experience and quality of contact and personal perceptions of prejudice suggest that there is a possibility that quality of contact could also predict group perceptions of prejudice. Even with an alpha of .61, quality of contact predicted personal perceptions of prejudice, therefore future research could re-examine this, by using a more reliable measure of quality of contact. It can be assumed that a better measure will produce quality of contact as an even stronger predictor in personal perceptions of prejudice. Quality of contact could be further explored in future research by looking at

the role time plays in forming intergroup friendships, and possibly looking at time in the country as a moderator between quality of contact and perceptions of prejudice.

Moreover, even though the present study failed to find mediation, future research could look at indirect effects between the variables. For example, in the model based on Jackson and Poulsen's previous research, it could be that even though openness to experience did not affect perceptions of prejudice, openness to experience could affect contact, and contact affects perceptions of prejudice, consequently resulting into an indirect affect of openness to experience on perceptions of prejudice.

Lastly, future research could look at other important cues that could influence how international students perceive their university experiences and more specifically how they perceive prejudice against the self and their group. Proficiency in the language of instruction, variance in the accent when speaking, clothing that makes them more visible as foreigners could be additional predictors worth examining in the future.

### *Conclusions*

To summarize, the results of the present study provided support for the two main hypotheses. The combination of stigma vulnerability, right-wing authoritarianism, openness to experience and contact was related to both personal and group perceptions of prejudice. Moreover, important relationships between the variables emerged, such as the negative relationship between right-wing authoritarianism and openness to experience, and openness to experience with both quantity and quality of contact. In addition, the present study found support for the self-categorization/rejection-identification model, indicating that international students perceiving prejudice would also identify with the international students group and their national group.

The present findings are relevant to universities enrolling significant numbers of international students. If universities could work towards making international students feel more part of the university student group, relations and contact of international students with domestic students could be greatly improved, decreasing perceived prejudice. On the other hand, if universities work towards reducing prejudice on campus, relations between domestic and international students could improve. Furthermore, the present study also showed that even though there is some space for improving the experience of international students, individual differences play also a significant role in how international students view and experience university life. International students scoring high on right-wing authoritarianism, tend to see more prejudice around them even in ambiguous situations. In addition, international students more open to experience, are more willing to engage in more frequent and cooperative contact with domestic students.

All in all, the current study provides important information regarding international students' perceptions of prejudice revealing variables such as stigma vulnerability and contact as important predictors of personal and group perceptions of prejudice. Moreover, the present study supports the self-categorization/rejection-identification model as a way to guide or influence international students choice of group identification, but further research is needed to replicate and expand the findings presented here.

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Appendix A

Informed Consent Form

## Informed Consent Form

### “International Students’ Personality Characteristics and Experiences in University”

Principal Investigator: Liana Danielidou (M.A. Student)  
Department of Psychology  
Brock University  
[ld06tu@brocku.ca](mailto:ld06tu@brocku.ca)

Faculty Supervisor: Dr. Angela Book  
Department of Psychology  
Brock University  
001 905 688-5550 Ext. 5223  
[abook@brocku.ca](mailto:abook@brocku.ca)

#### INVITATION

You are invited to participate in a study that involves research. The purpose of this study is to look at individual attitudes and experiences in the university setting.

#### WHAT’S INVOLVED

As a participant you will be asked to fill out several questionnaires regarding your personal attitudes and experiences. Participation will take approximately 1 hour of your time.

#### POTENTIAL BENEFITS AND RISKS

Participation in this study will likely give you a greater insight into your own personality and attitudes.

#### CONFIDENTIALITY

Information that you provide will be kept confidential. Only the researchers will have access to the information that you give, and none of the information will be linked to your name. Rather it will be identified by an arbitrary number, ensuring confidentiality. It will not be possible to withdraw data after they are submitted at the website. Data collected during this study will be kept in a secure location. Five years following publication, all data will be destroyed. Access to this data will be restricted to the principal investigator (Liana Danielidou) and the faculty supervisor (Dr. Angela Book).

#### VOLUNTARY PARTICIPATION

Participation in this study is voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Further, you may decide to withdraw from this study at any time.

#### PUBLICATION OF RESULTS

Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available, upon request, from the principal investigator in August 2008.

#### CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact the principle investigator or the faculty supervisor using the contact information provided above.

This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University (file# 06-360). If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at 001 905 688-5550 Ext. 3035 or at [reb@brocku.ca](mailto:reb@brocku.ca)

Thank you for your assistance in this project.

#### CONSENT FORM

By clicking the button below, you state that you understand that your participation is entirely voluntary:

*I have read the above letter of information/consent and freely agree to participate in "International Students' Personality Characteristics and Experiences in University." I am aware that I can contact Liana Danielidou ([ld06tu@brocku.ca](mailto:ld06tu@brocku.ca)) with any question, concern or complaint that I have regarding this research. Should this not be to my satisfaction, I am also aware that I may contact the Chair of the Psychology Department ( Dr. Kathy Belicky at 001 905 688-5550 Ext. 3873), who can provide answers to pertinent questions about the research participants' rights.*

Appendix B

Debriefing Form

## Debriefing Form

### “International Students’ Personality Characteristics and Experiences in University”

Thank you for participating in this study!

The study you have just participated in, is about the role of personality and contact between international and domestic students, and how these can influence international students’ perceptions of prejudice and group identification. It is expected that an individual with an “open to contact personality” will seek and experience more contact with domestic students and consequently show less perceptions of prejudice. This research is being conducted through the Psychology Department at Brock University by Liana Danielidou (M.A. student), and has received ethical clearance from the Research Ethics Board (file# 06-360). If you feel the need to talk to someone about experiences you remembered during this study you can contact your university’s Personal Counselling Services.

Should you have any questions or concerns, please contact the principal investigator, Liana Danielidou, at [ld06tu@brocku.ca](mailto:ld06tu@brocku.ca) . Alternatively, you may contact the faculty supervisor, Dr. Angela Book at [abook@brocku.ca](mailto:abook@brocku.ca). Should this not be to your satisfaction, you may contact the Chair of the Psychology Department (Dr. Kathy Belicky) at 001 905 688-5550 Ext. 3873 or the Research Ethics Officer at [reb@brocku.ca](mailto:reb@brocku.ca) or 001 905 688-5550 Ext. 3035, who can provide answers to pertinent questions about the research participants’ rights.

The results of this research will be available in late August 2008. If you would like to receive information about the results of this research, please send an email at that time to [ld06tu@brocku.ca](mailto:ld06tu@brocku.ca) , It is not possible to provide individual scores on any of the measures as your name will not be associated with the questionnaires.

Thank you once again for your time!

Liana Danielidou  
M.A. student  
[ld06tu@brocku.ca](mailto:ld06tu@brocku.ca)

## Appendix C

### Demographic Information



1. Age: \_\_\_\_\_

2. Sex: \_\_\_\_\_

3. Nationality: \_\_\_\_\_

4. Year of Study: \_\_\_\_\_

5. Field of Study: \_\_\_\_\_

6. English Language Score (e.g. Toefl, GCE, IELTS): \_\_\_\_\_

7. Have you attended International Orientation?

Yes	No
-----	----

8. Have you attended General Orientation?

Yes	No
-----	----

9. Length of time in Canada: \_\_\_\_\_

10. Have you ever reported an incident of discrimination to the Human Rights and Equity Services?

Yes	No
-----	----

11. Have you ever thought of reporting an incident of discrimination to the Human Rights and Equity Services?

Yes	No
-----	----

12. Have you attended parties with domestic students?

Yes	No
-----	----

13. If yes, how many times? \_\_\_\_

14. if no, would you want to attend a party with domestic students?

Yes	No
-----	----

15. In your own words, using 3-4 adjectives, describe the main characteristics of domestic students at your university

Appendix D

Prejudice Perception Assessment Scale

(Gilbert, 1998)

The following five situations are hypothetical. Each situation ends with a negative outcome for a hypothetical international student. Please read each scenario carefully and respond to each one by clicking the response that best fits your opinion about why the negative outcome occurred.

Domestic = someone who is a citizen and resident of the country you are studying at.

Example: If you are studying in Canada, all Canadians are considered domestic.

International = someone who is not a citizen of the country you are studying at.

Example: If you are studying in England and you are not English then you are considered international.

1. It is the first day of class for the spring semester and your first class is being held in a large auditorium. You arrive and take a seat in the front of the room next to a student who happens to be a domestic student. You notice the student is looking around and then right away, the student gets up and moves to another seat. You do not notice where the student sits, but you are wondering why the student decided to move to another seat. In your opinion, the likelihood that this event has happened because the domestic student is prejudiced against international students is:

1	2	3	4	5	6	7
Extremely Likely	Very Likely	Somewhat Likely	Unable to Determine	Somewhat Unlikely	Very Unlikely	Extremely Unlikely

2. You are enrolled in a small class in which you are the only international student. Your professor happens to be domestic. You study hard for your first exam (essay questions only) and you expect to get an A or a high B. However, when you get your exam back, your grade is a C. You do not know other students' grades are. However you are wondering why your grade is so much lower than what you expected. In your opinion, the likelihood that this low grade is due to prejudice of the professor against international students is:

1	2	3	4	5	6	7
Extremely Likely	Very Likely	Somewhat Likely	Unable to Determine	Somewhat Unlikely	Very Unlikely	Extremely Unlikely

3. You make a visit to the department store near the campus during the store's busy season. You notice that the store is crowded, and there are lots of salesclerks of various racial backgrounds. One particular person who is domestic, is casually following you as you as you wonder through the store glancing at merchandise. In your opinion, the likelihood that this salesclerk's interest in you is due to prejudice against international students is:

1 Extremely Likely	2 Very Likely	3 Somewhat Likely	4 Unable to Determine	5 Somewhat Unlikely	6 Very Unlikely	7 Extremely Unlikely
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4. You answer an advertisement for a roommate. The advertisement states, “Two students living in three-bedroom house need third student”, and goes on to list the price and a location in town where many students reside. When you arrive to check out the place, you discover that the students are domestic. They let you know that many students contacted them about the advertisement, and they have scheduled 3 people to interview for the roommate position later that day. Two days later, you learn that they selected another person, who is also domestic, for their roommate. In your opinion the likelihood that these students did not choose you as their roommate because of prejudice against international students is:

1 Extremely Likely	2 Very Likely	3 Somewhat Likely	4 Unable to Determine	5 Somewhat Unlikely	6 Very Unlikely	7 Extremely Unlikely
--------------------------	------------------	-------------------------	-----------------------------	---------------------------	-----------------------	----------------------------

5. During the beginning of the semester, you decide to make a drop-in visit to your professor’s office to discuss your plans for the term paper assignment. You have never had this professor for a class before. The time you arrive is not a designated time for office hours, but you notice the professor is talking with another student (who is not in your class). Both the professor and the student are domestic. The professor sees you but does not immediately acknowledge your presence or let you know how long you may be waiting. After waiting 10 minutes you are starting to wonder if you should stay or leave. In your opinion, the likelihood that this professor’s actions are due to prejudice against international students is:

1 Extremely Likely	2 Very Likely	3 Somewhat Likely	4 Unable to Determine	5 Somewhat Unlikely	6 Very Unlikely	7 Extremely Unlikely
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## Appendix E

### Quantity of Contact Scale

(Voci & Hewstone, 2003)

**Important Note:**

Domestic = someone who is a citizen and resident of the country you are studying at.

Example: If you are studying in Canada, all Canadians are considered domestic.

International = someone who is not a citizen of the country you are studying at.

Example: If you are studying in England and you are not English then you are considered international.

1. Please indicate the amount of contact you have with domestic students.

1 No contact at all	2	3	4	5	6	7 A great deal of contact
---------------------------	---	---	---	---	---	------------------------------------

2. How often do you have contact with domestic students?

1 Never	2	3	4	5	6	7 Very frequently
------------	---	---	---	---	---	-------------------------

3. How many domestic students do you know?

0	1	2	3	4	5	6	7	8	9	+10
---	---	---	---	---	---	---	---	---	---	-----

4. In an average week how many hours do you spend interacting with domestic students?

0	1	2	3	4	5	6	7	8	9	+10
---	---	---	---	---	---	---	---	---	---	-----

## Appendix F

### Quality of Contact Scale

(Voci & Hewstone, 2003)



Important Note:

Domestic = someone who is a citizen and resident of the country you are studying at.

Example: If you are studying in Canada, all Canadians are considered domestic.

International = someone who is not a citizen of the country you are studying at.

Example: If you are studying in England and you are not English then you are considered international.

1. When you meet domestic students do you find the contact cooperative?

1 Never	2	3	4	5	6	7 Very frequently
------------	---	---	---	---	---	-------------------------

2. When you meet domestic students do you find the contact superficial or insencere?

1 Not at all	2	3	4	5	6	7 Very
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## Appendix G

### International Student Personal Perceptions of Prejudice Scale

(Carvallo & Pelham, 2006)

Important Note:

Domestic = someone who is a citizen and resident of the country you are studying at.

Example: If you are studying in Canada, all Canadians are considered domestic.

International = someone who is not a citizen of the country you are studying at.

Example: If you are studying in England and you are not English then you are considered International.

1. Prejudice against international students has affected me personally.

1 Strongly Disagree	2	3	4	5	6	7	8	9 Strongly Agree
---------------------------	---	---	---	---	---	---	---	------------------------

2. I have personally experienced discrimination as an international student.

1 Strongly Disagree	2	3	4	5	6	7	8	9 Strongly Agree
---------------------------	---	---	---	---	---	---	---	------------------------

3. I have often been treated unfairly because of being an international student.

1 Strongly Disagree	2	3	4	5	6	7	8	9 Strongly Agree
---------------------------	---	---	---	---	---	---	---	------------------------

4. Because of discrimination against international students, I have been deprived of opportunities that are available to university students.

1 Strongly Disagree	2	3	4	5	6	7	8	9 Strongly Agree
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## Appendix H

### International Student Group Perceptions of Prejudice Scale

(Carvallo & Pelham, 2006)

Important Note:

Domestic = someone who is a citizen and resident of the country you are studying at.

Example: If you are studying in Canada, all Canadians are considered domestic.

International = someone who is not a citizen of the country you are studying at.

Example: If you are studying in England and you are not English then you are considered International.

1. Prejudice against international students has affected the average international student.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

2. The average international student has experienced discrimination.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

3. The average international student has often been treated unfairly because he/she is not a domestic student.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

4. Because of discrimination against international students, the average international student has been deprived of opportunities that are available to university students.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

## Appendix I

### Group Identification Scale

(Hodson & Esses, 2002)

Important Note: In questions 4, 5, and 6 you are being asked about your “National group.” Your “National group” is the country you are coming from. For example, when a student from Germany answers this question, his/her “National group” will be his/her German identity.

1. To what extent is the membership in the “international students” group an important part of your identity?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------

2. To what extent do you feel that you have a lot in common with members of the “international students” group?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------

3. To what extent do you have a strong sense of attachment to the “international students” group?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------

4. To what extent is the membership in your “national” group an important part of your identity?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------

5. To what extent do you feel you have a lot in common with members of your “national” group?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------

6. To what extent do you have a strong sense of attachment to your “national” group?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------

7. To what extent is the membership in the “University students” group an important part of your identity?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------

8. To what extent do you feel you have a lot in common with member of the “University students” group?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------

9. To what extent do you have a strong sense of attachment to the “University students” group?

1 Not at all	2	3	4	5	6	7 Very much so
-----------------	---	---	---	---	---	----------------------



Appendix J

Research Ethics Board Approval

DATE: August 2, 2007

FROM: Michelle McGinn, Chair  
Research Ethics Board (REB)

TO: Angela Book, Psychology  
Liana DANIELIDOU

FILE: \_\_\_\_\_ 06-360 DANIELIDOU

TITLE: The Role of an "Open to Contact Personality" and Contact on the Perceptions of Prejudice and Group Identification of International Students

---

The Brock University Research Ethics Board has reviewed the above research proposal.

**DECISION: Accepted as Clarified, However**

**Please Note:**

- **Please include the country code for long distance numbers.**
- **Please remove the following statement from the debriefing forms: "There are no foreseeable risks associated with participation in this study".**

This project has received ethics clearance for the period of August 2, 2007 to June 30, 2008 subject to full REB ratification at the Research Ethics Board's next scheduled meeting. The clearance period may be extended upon request. ***The study may now proceed.***

Please note that the Research Ethics Board (REB) requires that you adhere to the protocol as last reviewed and cleared by the REB. During the course of research no deviations from, or changes to, the protocol, recruitment, or consent form may be initiated without prior written clearance from the REB. The Board must provide clearance for any modifications before they can be implemented. If you wish to modify your research project, please refer to <http://www.brocku.ca/researchservices/forms> to complete the appropriate form **Revision or Modification to an Ongoing Application.**

Adverse or unexpected events must be reported to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants and the continuation of the protocol.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research protocols.

The Tri-Council Policy Statement requires that ongoing research be monitored. A Final Report is required for all projects upon completion of the project. Researchers with projects lasting more than one year are required to submit a Continuing Review Report annually. The Office of Research Services will contact you when this form ***Continuing Review/Final Report*** is required.

Please quote your REB file number on all future correspondence.  
MM/bb

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